

Work Order ID 137666

Wednesday, October 07, 2015 12:42:35 PM

137666

Page 1

Item ID: D5149-1TRN

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Fwd Step Base Turning Detail

Start Date: 11/02/15 Start Qty: 4.00

4

Cust Item ID:

Required Date: 11/02/15 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: ML3 Date: 10/07/2015 Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D5149	C								
100	MORI SEIKI CNC LATHE LARGE	0.00							
100									
Doosan	Memo	0.05							
Doosan Lathe	Turn blank as per Folio FB355								
									DAS 40 9-89 15/10/14
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									
									DAS 40 9-89 15/10/14
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.00							
Quality Control									
									DAS 44 9-89 15/10/14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval				
Description Work Order Deviation				Disposition							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter		☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes		☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center		☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence	
				OTHER :							

Work Order ID 137666

Wednesday, October 07, 2015 12:42:35 PM

137666

Page 2

Item ID: D5149-1TRN Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Fwd Step Base Turning Detail
Start Date: 11/02/15 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 11/02/15 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130	Packaging					4	0		DAS 44 9-89 15/10/14
Packaging	Memo	0.00							
Packaging	LOCATION: MAT060								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.01							
Quality Control									

_____ MS _____ OCT 15 2015

20151015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Wednesday, October 07, 2015 12:42:34 PM

Page 1

Work Order ID: 137666

137666

Parent Item: D5149-1TRN

D5149-1TRN

Parent Item Name: Fwd Step Base Turning Detail

Start Date: 11/02/15

Required Date: 11/02/15

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A NEW ISSUE 14-12-08 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6R3.000		Purchased	No				f	1.1300		1.751579			
M6061T6R3 000									**			15/10/14	DAS 40 9-89
6061-T6 RD BAR 3.000"													

Location

Loc Qty

Loc Code

MAT

1.13

→ M131700

1.13

1.8

NOT ENOUGH MATERIAL
IN THE SYSTEM.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

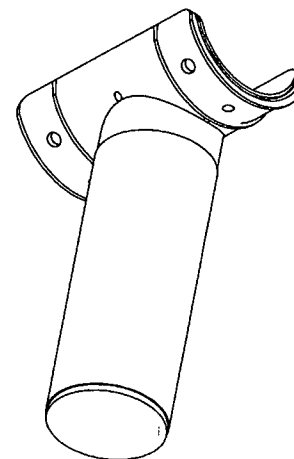
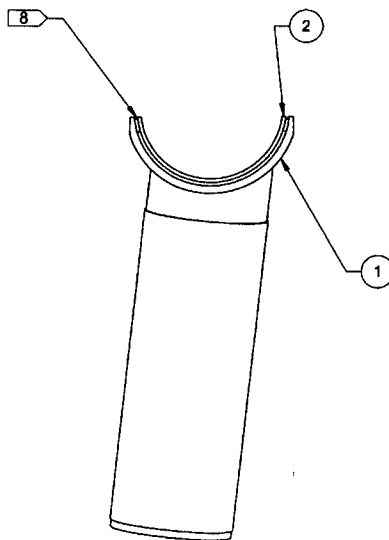
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐				FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
				OTHER : ☐							

ITEM	QTY	P/N	DESCRIPTION
	X	D5149-041	FWD STEP ASSEMBLY
1	1	D5149-041W	FWD STEP BASE WELDMENT
2	1	D5151-1	CLAMP CUSHION



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER

NO. 1376666.MLS

15-10-08

RELEASED

2015 MAY 12
A.R. ECHS-570

D5149-041 FWD STEP ASSEMBLY

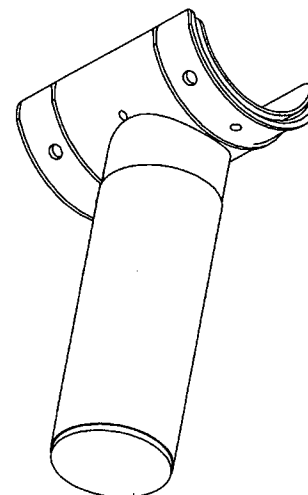
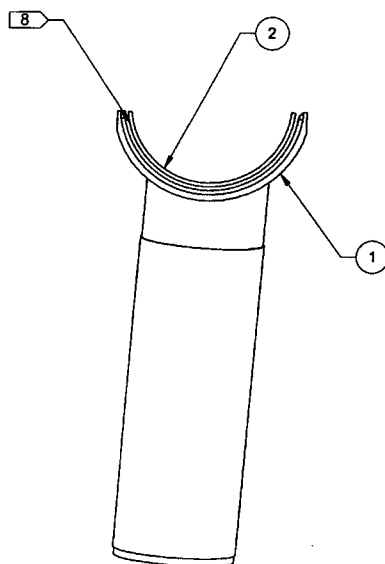
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.69 lbs
- 8) BOND D5151-1 CUSHION TO D5149-041W BASE WELDMENT USING 3M 1300L ADHESIVE

C	ANTISKID FINISH DIM MODIFIED DUE TO INTERFERENCE WITH WELD (SHT 3 & 4)	AP	15.04.27
B	COMPLETE RE-DESIGN, SEE PREVIOUS REV FOR DETAILS	DB	15.01.14
A	NEW ISSUE	DB	14.10.25
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	AJS	DRAWING NO. REV. C	
MFG. APPR.	DD	D5149 SHEET 1 OF 11	
APPROVED	HS	TITLE SCALE	
DE APPR.	DS	STEP ASSEMBLY NTS	
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APPROVED

ITEM	QTY -043	P/N	DESCRIPTION
	X	D5149-043	AFT STEP ASSEMBLY
1	1	D5149-043W	AFT STEP BASE WELDMENT
2	1	D5151-3	CLAMP CUSHION



D5149-043 AFT STEP ASSEMBLY

RELEASED

2015 MAY 12

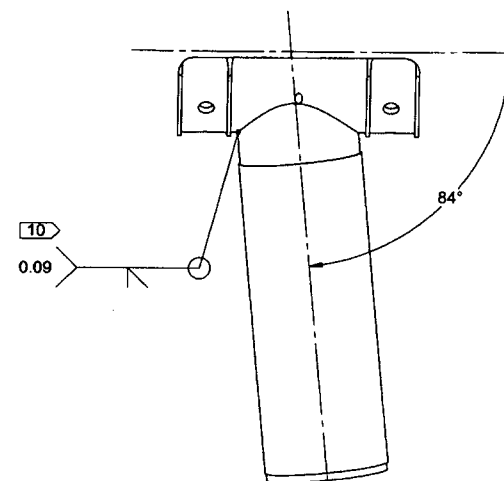
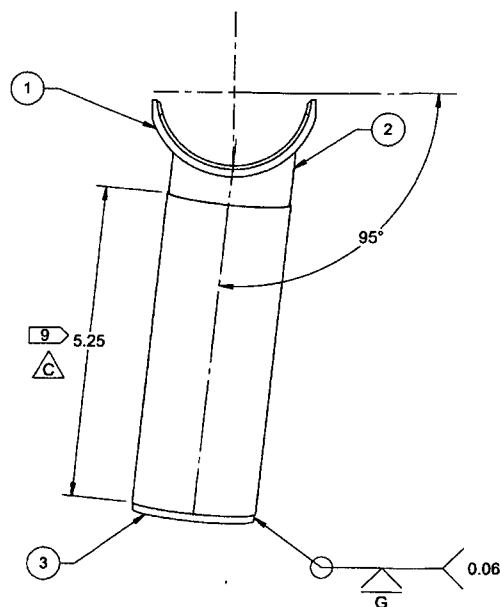
A.P. ECN 15-570

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.87 lbs
- 8) BOND D5151-3 CUSHION TO D5149-043W BASE WELDMENT USING 3M 1300L ADHESIVE

APPROVED	DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
	DRAWN	AP		
	CHECKED	AJS	DRAWING NO.	REV. C
	MFG. APPR.	DD	D5149	SHEET 2 OF 11
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	STEP ASSEMBLY	NTS
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ITEM	QTY-041W	P/N	DESCRIPTION
	X	D5149-041W	FWD STEP BASE WELDMENT
1	1	D5149-1	FWD STEP BASE
2	1	D5149-3	FWD STEP
3	1	D5149-5	STEP CAP



D5149-041W FWD STEP BASE WELDMENT

RELEASED

2015 MAY 12

A.P. ECN 15-570

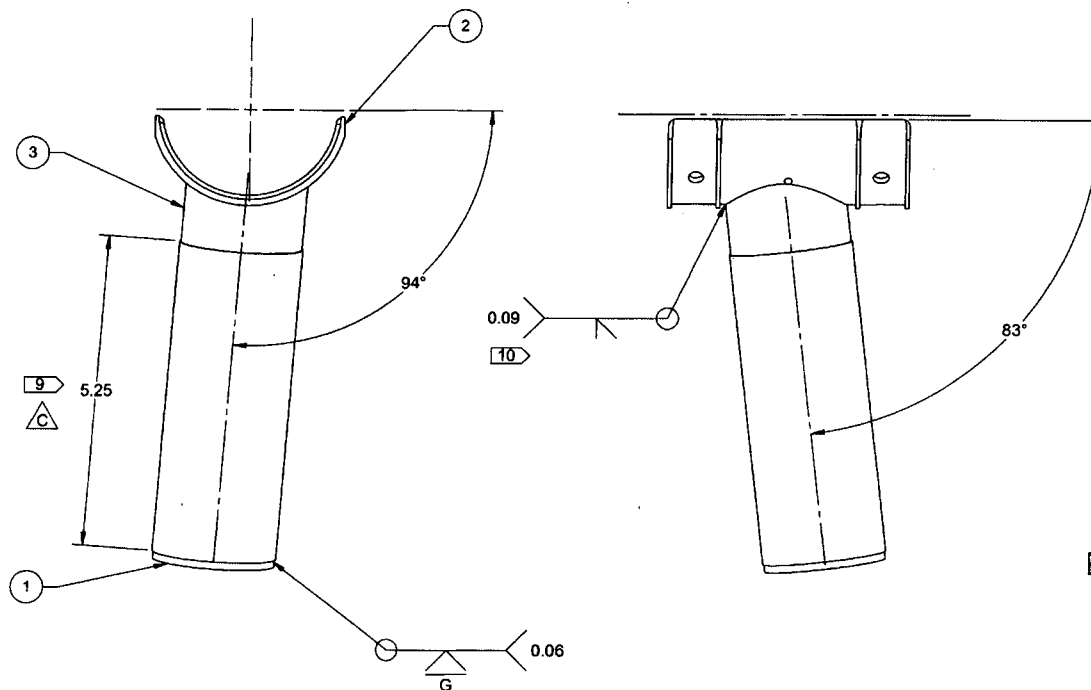
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.67 lbs
- 8) WELDING PER DART QSI 004
- 9) APPLY BLACK ANTI-SKID PAINT TO STEP TUBE, ALL AROUND PER DART QSI 005 4.4
- 10) ALIGN D5149-3 FWD STEP WITH EDGE OF ALIGNMENT HOLES IN D5149-1 FWD STEP BASE PRIOR TO WELDING

APPROVED

DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	AJS	DRAWING NO.	REV. C
MFG. APPR.	DD	D5149	SHEET 3 OF 11
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	STEP ASSEMBLY	NTS
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ITEM	QTY- 043W	P/N	DESCRIPTION
	X	D5149-043W	AFT STEP BASE WELDMENT
1	1	D5149-5	STEP CAP
2	1	D5149-7	AFT STEP BASE
3	1	D5149-9	AFT STEP



RELEASED
2015 MAY 12
A.P. ECU 15-570

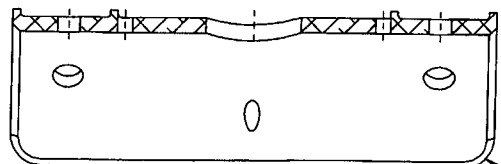
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.67 lbs
- 8) WELDING PER DART QSI 004
- 9) APPLY BLACK ANTI-SKID PAINT TO STEP TUBE, ALL AROUND PER DART QSI 005 4.4
- 10) ALIGN D5149-9 AFT STEP WITH EDGE OF ALIGNMENT HOLES IN D5149-7 AFT STEP BASE PRIOR TO WELDING

APPROVED

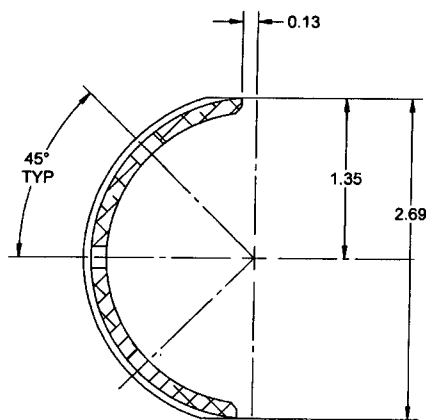
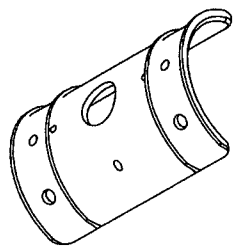
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DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AJS	DRAWING NO.	REV. C
MFG. APPR.	DD	D5149	SHEET 4 OF 11
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	STEP ASSEMBLY	NTS
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8 7 6 5 4 3 2 1

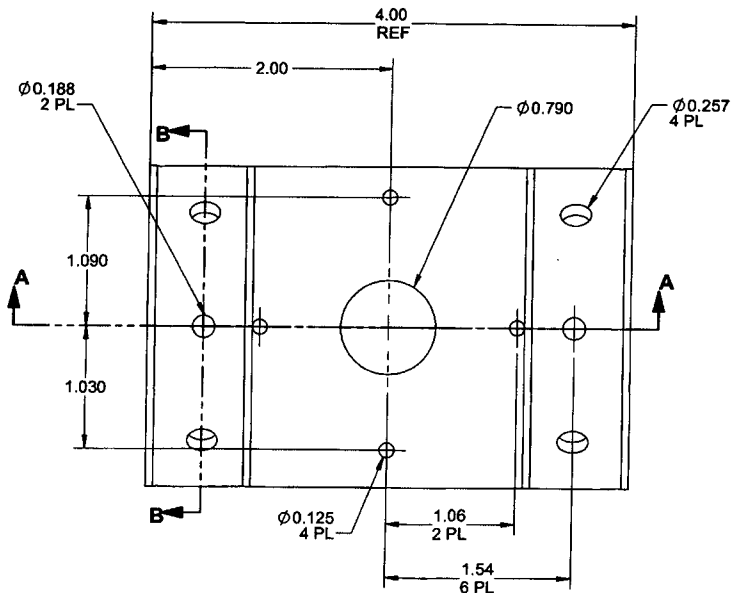


SECTION A-A

0.06 X 45° CMF
ALL AROUND INSIDE EDGE



SECTION B-B



D5149-1 FWD STEP BASE
(MAKE FROM D5149-1TRN)

RELEASED

2015 MAY 12
A.P. ECU 15-570

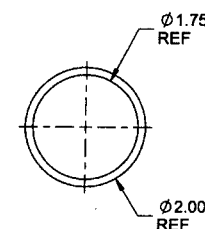
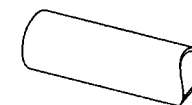
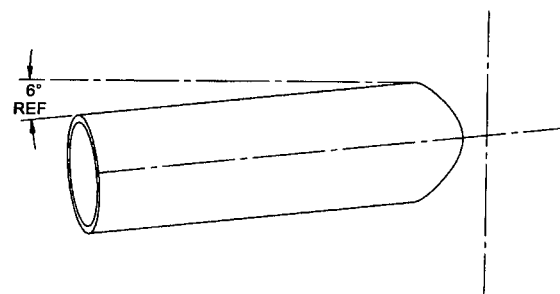
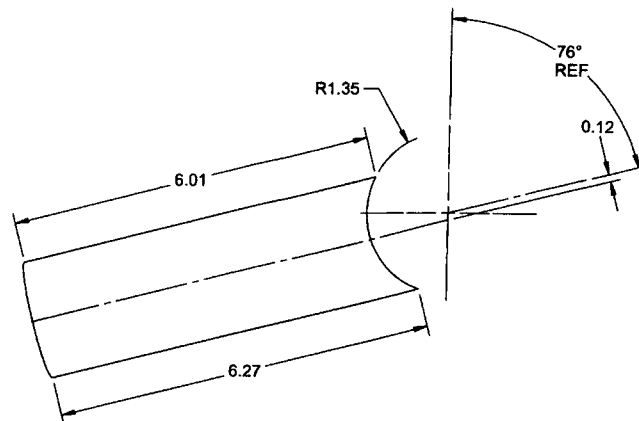
NOTES:

- 1) MATERIAL: MAKE FROM D5149-1TRN
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.20 lbs

APPROVED

DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	AJS	DRAWING NO.	REV. C
MFG. APPR.	DD	D5149	SHEET 5 OF 11
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	STEP ASSEMBLY	NTS
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8 7 6 5 4 3 2 1



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2015 MAY 12
A.P. ECH 15-570

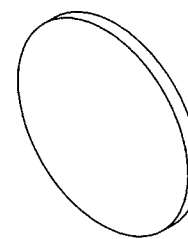
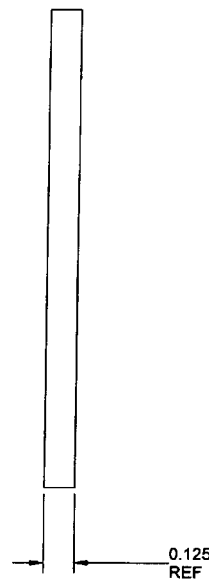
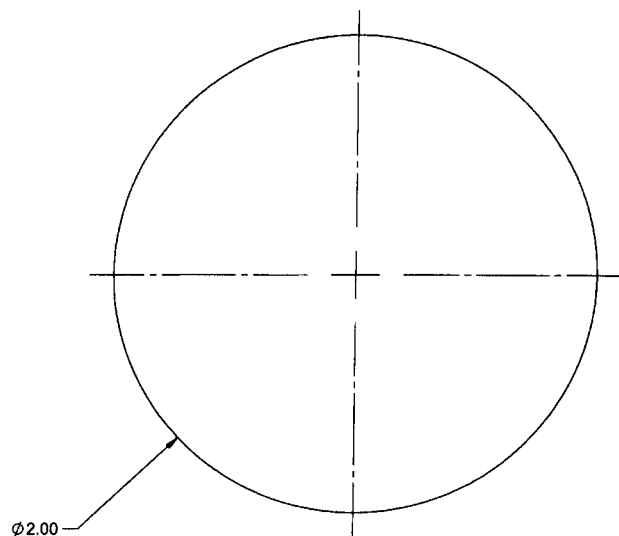
D5149-3 FWD STEP

NOTES:

- 1) MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING PER WW-T-700/6 OR QQ-A-200/8 OR QQ-A-225/8
OR AMS 4080 OR AMS 4082 OR AMS 4083 OR ASTM B210 OR ASTM B241
REF DART SPEC M6061T6T2.000W0.125
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.42 lbs

APPROVED

DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	AJS	DRAWING NO.	REV. C
MFG. APPR.	DD	D5149	SHEET 6 OF 11
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	STEP ASSEMBLY	NTS
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D5149-5 STEP CAP

RELEASED

2015 MAY 12

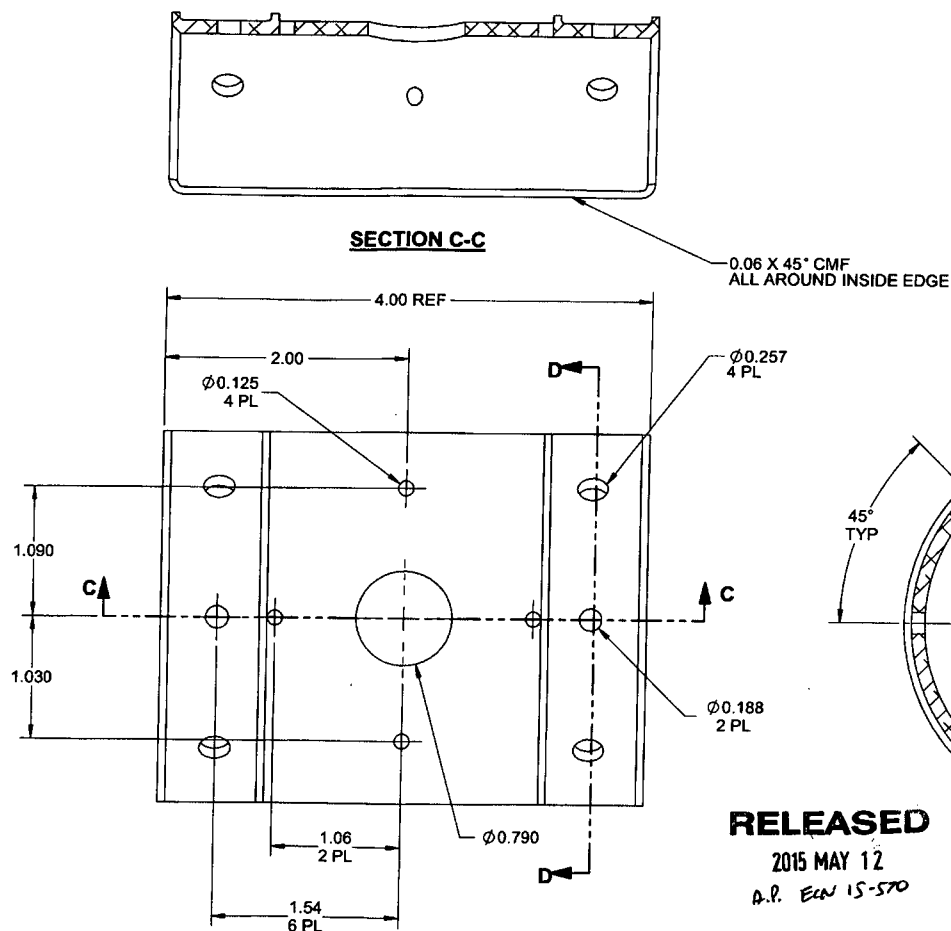
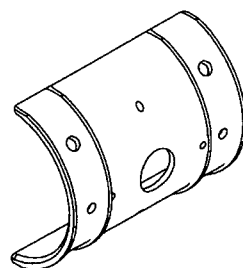
A.P. EN 15-570

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET, 0.125 THICK
PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC M6061T6S.125
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.04 lbs

APPROVED

DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	AJS	DRAWING NO.	REV. C
MFG. APPR.	DD	D5149	SHEET 7 OF 11
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	STEP ASSEMBLY	NTS
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D5149-7 AFT STEP BASE
(MAKE FROM D5149-7TRN)

RELEASED

2015 MAY 12
A.P. ECU 15-570

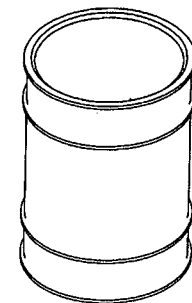
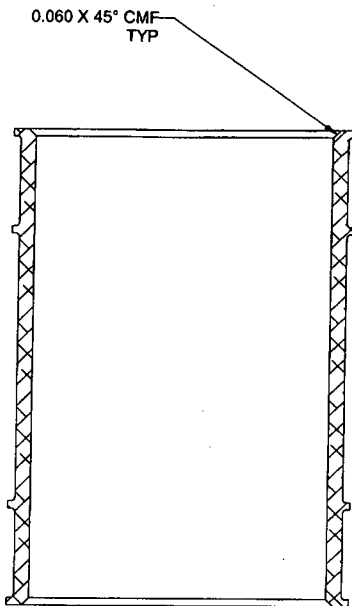
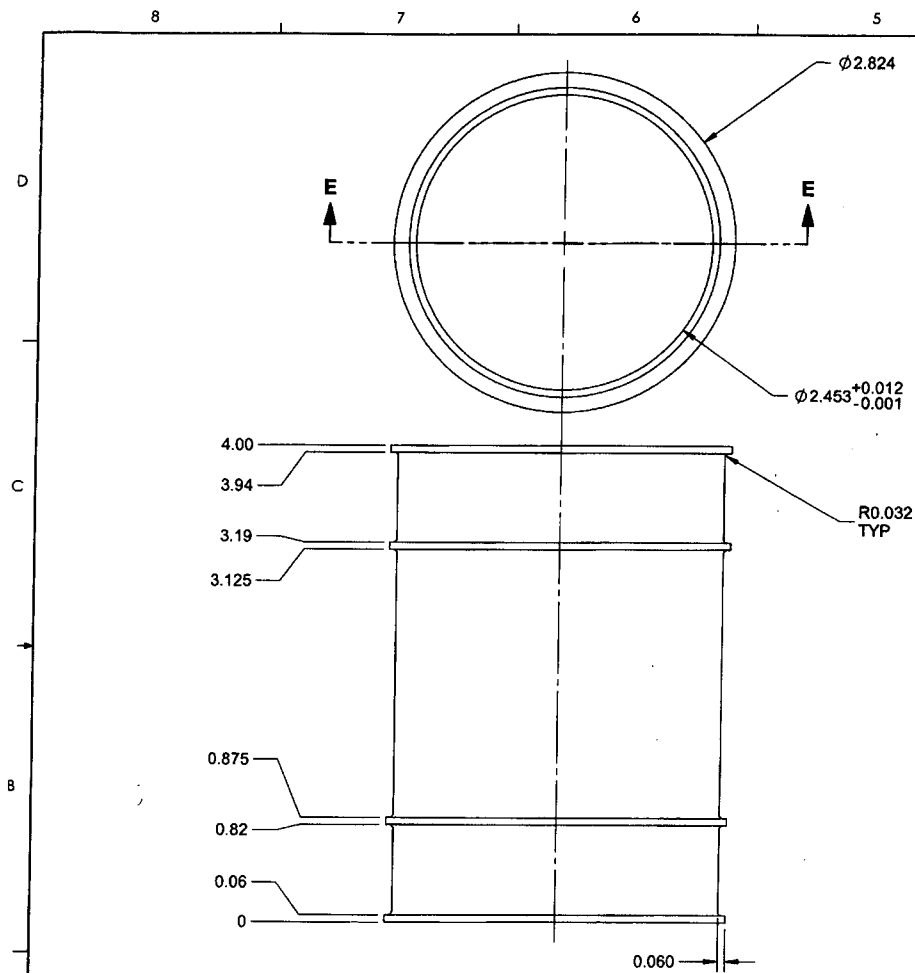
SECTION D-D

NOTES:

- 1) MATERIAL: MAKE FROM D5149-7TRN
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.30 lbs

APPROVED

DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	AJS	DRAWING NO.	REV. C
MFG. APPR.	DD	D5149	SHEET 8 OF 11
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	STEP ASSEMBLY	NTS
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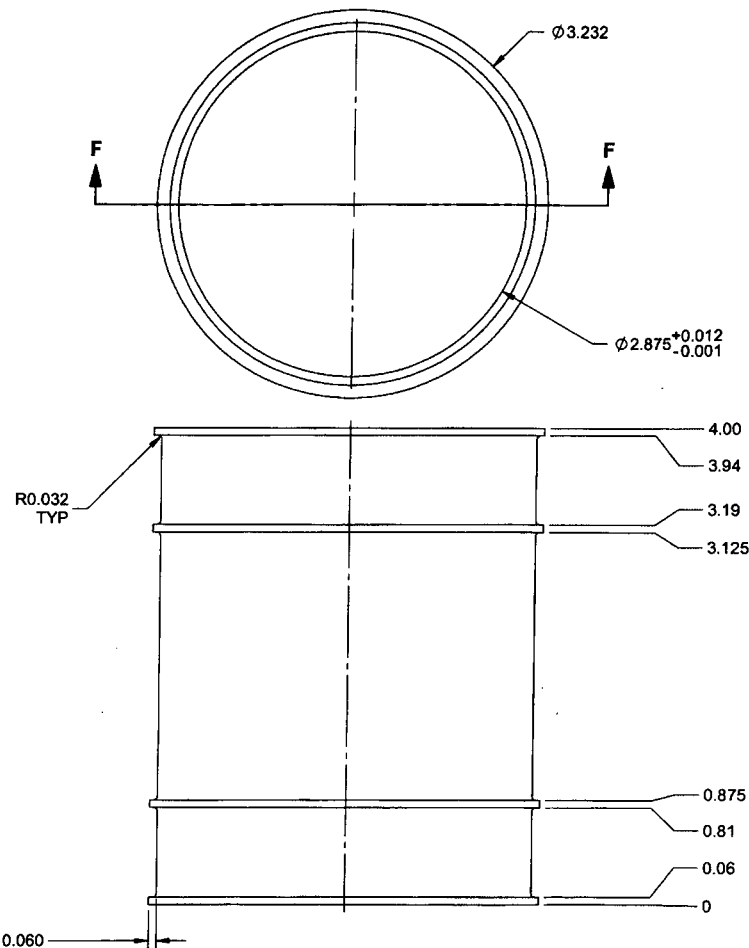
SECTION E-E

D5149-1TRN TURNING DETAIL

- NOTES:**
- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-200/8 (OR AMS 4160) OR ASTM B211 OR ASTM B221
REF DART SPEC. M6061T6R
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.41 lbs

RELEASED
2015 MAY 12
A.P. ECU 15-570

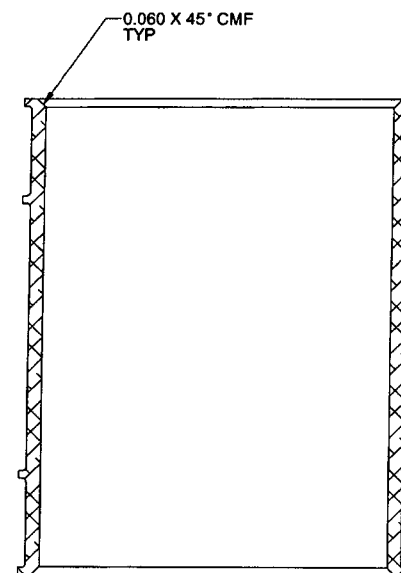
APPROVED	DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
	DRAWN	AP		
	CHECKED	AJS	DRAWING NO. D5149	REV. C
	MFG. APPR.	DD		SHEET 9 OF 11
	APPROVED	HS	TITLE STEP ASSEMBLY	SCALE
	DE APPR.	DS		NTS
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D5149-7 TRN TURNING DETAIL

NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-200/8 (OR AMS 4160) OR ASTM B211 OR ASTM B221
REF DART SPEC. M6061T6R
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.41 lbs

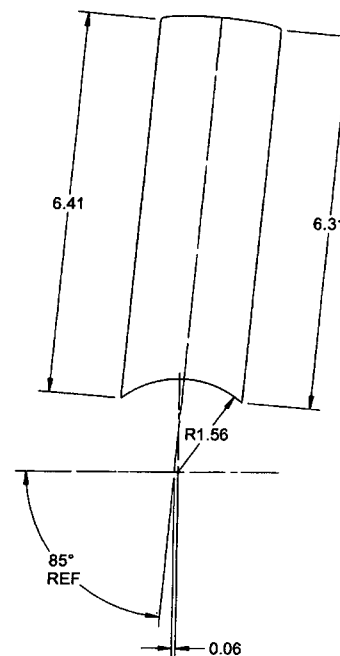
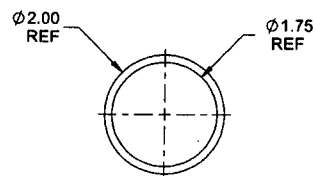
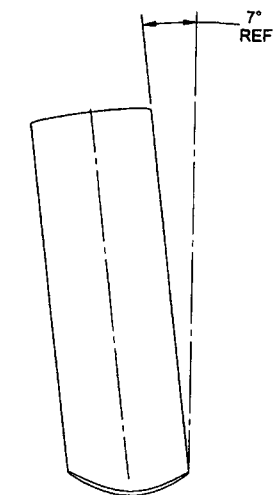


SECTION F-F

RELEASED

2015 MAY 12
A.P. EGN 15-570

APPROVED	DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
	DRAWN	AP		
	CHECKED	AJS	DRAWING NO.	REV. C
	MFG. APPR.	DD	D5149	SHEET 10 OF 11
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	STEP ASSEMBLY	NTS
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D5149-9 AFT STEP

RELEASED

2015 MAY 12

A.P. ECH 15-570

NOTES:

- 1) MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING PER WW-T-700/6 OR QQ-A-200/8 OR QQ-A-225/8 OR AMS 4080 OR AMS 4082 OR AMS 4083 OR ASTM B210 OR ASTM B241
REF DART SPEC M6061T6T2.000W0.125
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.44 lbs

APPROVED	DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
	DRAWN	AP		
	CHECKED	AJS	DRAWING NO. D5149	REV. C
	MFG. APPR.	DD		SHEET 11 OF 11
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	STEP ASSEMBLY	NTS

DATE 15.04.27

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